89948

S/126/61/011/001/016/019
E032/E314

9.4300 (1043, 1143, 1158)

AUTHORS: Zavadskiy, E.A. and Fakidov, I.G.

TITLE: Measurement of the Hall Effect of n-Ge in Strong Pulsed Magnetic Fields

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol. 11, No. 1, pp. 147 - 149

TEXT: This paper is a continuation of the previous paper in this issue (pp. 145 - 147). In earlier papers the authors showed that at sufficiently low temperatures (60-90 $^{\circ}$K) the effect of the quantisation of energy of current carriers on the electrical conductivity becomes appreciable for magnetic fields of 50-100 kOe. The aim of the present paper was to elucidate the effect of this quantisation on the Hall constant. Plates (9 x 1.5 x 0.8 mm) cut from n-Ge with ρ = 2, 8.5 and 30 ohm.cm at room temperature were employed. The Hall e.m.f. was exhibited directly on a CRO screen as a function of the magnetic field. The measurements were carried out for different current directions through the specimen and different magnetic-field

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Measurement of the Hall Effect of n-Ge ....

directions.   In the temperature range 58 to 310 ^{o}K fields up to 200 kOe were used.   In addition, the Hall effect was measured at 77 ^{o}K in fields up to 450-500 kOe but the Hall constant was found to be independent of the magnetic field.   The quantisation of the energy of the carriers in a magnetic field becomes effective for hw $>$ kT where w is the cyclotron frequency and h is the Planck constant divided by 2π.   Assuming that the mean value of the effective mass of the carriers is m^{τ} = 0.12 m_{o}, one finds that with T = 77 ^{o}K the condition

hw = kT is already satisfied at H = 69 kOe and, consequently, at H = 500 kOe and T = 77 ^{o}K one finds that hw $\approx$ 7 kT . The absence of the field dependence of the Hall constant in this case is in disagreement with the predictions of Klinger and Voronyuk (Ref. 3) but is in agreement with the results of Argyres (Ref. 5).   Fig. 1 shows the dependence of the Hall e.m.f.   (V) on the magnetic field (kOe) for an n-Ge specimen

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Measurement of the Hall Effect of n-Ge .....

with $\rho = 30$ ohm.cm at $T = 20$ °K (Curve 1 corresponds to
a current density of 7.5 mA/mm^2, Curve 2 to 2.5 mA/mm^2).
The specimen for which Curve 1 was obtained was previously
used in measurements of the resistivity and a consideration
of the data obtained for it shows that in the region where
the Hall constant is variable Ohm's law ceases to hold.
This is confirmed by the second curve (Curve 2). Curve 1
was used to calculate the current carrier concentration as
a function of the magnetic field and this is shown in Fig. 2.
As can be seen from Fig. 2, different values of the current
density correspond to different values of the magnetic field
at which the change in the carrier concentration begins; thus,
the observed changes in the carrier concentration are closely
associated with departures from Ohm's law. In the specimen
with $\rho = 30$ ohm.cm at $T = 20$ °K scattering on impurity ions
is still very small. Further work is being carried out on

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Measurement of the Hall Effect of n-Ge ....

the Hall effect using specimens with considerably lower resistivities.   There are 2 figures and 5 references: 3 Soviet and 2 non-Soviet.

ASSOCIATION: Institut fiziki metallov AN SSSR   (Institute of Physics of Metals, AS USSR)

SUBMITTED: July 20, 1960

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Measurement of the Hall Effect on n-Ge ....
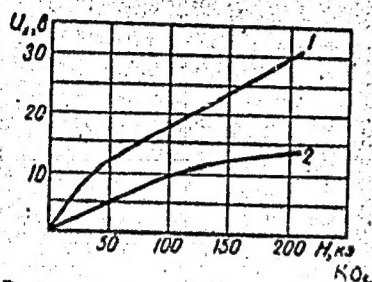
Fig. 1:   Fig. 2:

Рис. 1. Зависимость напряжения Холла от напряженности магнитного поля для образца n-Ge с ρ = 30 ом-см при T = 20° K.

Кривая 1 соответствует плотности тока 7,5 ма/мм2, а кривая 2 — 2,5 ма/мм2.
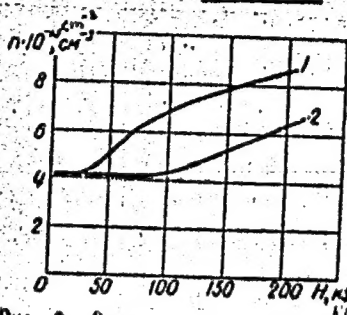
Рис. 2. Зависимость концентрации носителей тока от напряженности магнитного поля.

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24.2200 1144
18.8100   1418 1413 4 016

33451
S/126/61/012/006/005/023
E073/E535

AUTHORS: Zavadskiy, E.A. and Fakidov, I.G.

TITLE: Magnetization of the intermetallic compound MnAu$_2$ in super-high pulsed magnetic fields

PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.6, 1961, 832-837

TEXT: The measurements of A. J. Meyer and P. J. Taglang (Ref.2: J.Phys.Rad., 1956, 17, 457) revealed the existence of a threshold field and enabled investigation of the initial section of the approximation to saturation. By extrapolation, the saturation magnetization for several temperatures was calculated. Extrapolation to absolute zero enabled determining the magnetic moment per atom of manganese, which proved equal to 3.49 Bohr magnetons.   Obviously these results are very approximate, since the ranges of the magnetic fields (up to 28 kOe) and temperatures were not wide enough. Therefore, the authors investigated the magnetization of a polycrystalline MnAu$_2$ specimen in the temperature range 77 to 418°K in pulsed magnetic fields of up to 300 kOe.   At room temperature the field could be increased to

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Magnetization of the ...

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500 kOe.   The $MnAu_2$ compound was produced by fusing electrolytically purified manganese (99.98%) with 99.99% gold in an evacuated quartz ampoule at the temperature of 1100°C. The alloy was air-quenched and then annealed for two hours at 900°C followed by quenching in oil, annealing for 72 hours at 690°C followed by quenching in oil.   After carrying out the magnetic measurements, the specimens 1.2 x 0.8 x 10 mm were again annealed at 690°C and the measurements were repeated. The reproducibility proved to be satisfactory.   It was found from magnetization curves plotted on the basis of numerous oscillograms that these curves contained three characteristic sections at temperatures below the Neel point (368°K in the given case):
1. H < 10 kOe in which the susceptibility does not depend on the field strength and the alloy has an antiferromagnetic behaviour;
2. H > 30 kOe when the behaviour of the alloy is ferromagnetic;
3. Fields intermediate between the above two values in which the alloy has transient properties.
The investigated specimen had a density of 14.3 g/cm^3, the magnetic moment per manganese atom was 3.38 μ_B, which is very near to the

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respective value in ferromagnetic alloys and also very near to the value of 3.49 μ_B obtained by Meyer and Taglang. The temperature dependence of the saturation magnetization can be expressed satisfactorily by the equation

$$I_{\infty,T} = I_{\infty,0}(1 - \beta T^2),$$

where

$$I_{\infty,0} = 595 \text{ gauss and } \beta = 3.3 \cdot 10^{-6}$$

Meyer and Taglang also determined the saturation magnetization and its temperature dependence in fields up to 28 kOe. They assumed that the approximation to saturation would obey the square value law in all field intensities. The measurements described in this paper showed that the square value law is complied with at fields up to 35-40 kOe at a temperature $T = 290°K$ but only up to 37 kOe at $T = 77°K$. Extrapolated values of I, gauss vs. $1/H^2$ based on the square value approximation are considerably lower than those measured. The authors express the view that the behaviour in the paramagnetic range can be explained by introducing

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Magnetization of the ...

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an "effective" field composed of the external and the molecular fields. The applied magnetic fields were not high enough for unequivocal solution of the problem of the influence of the temperature on the coefficient of the molecular field. The paramagnetic measurements in stronger fields will be continued for the purpose of elucidating the influence of temperature on the molecular field and the magnetic moment of saturation in the paramagnetic state. There are 5 figures and 8 references: 3 Soviet-bloc and 5 non-Soviet-bloc. The English-language references read as follows. Ref.2: quoted in text; Ref.3: Asch G. J.Phys.Rad., 1959, 20, 349.

ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute of Physics of Metals AS USSR)

SUBMITTED: April 3, 1961

Card 4/4

ZAVADSKIY, E.A.; FAKIDOV, I.G.

Conductance of germanium in high pulsed magnetic fields in the region of mixed conductivity. Fiz.tver.tela 4 no.7:1704-1709 Jl '62. (MIRA 16:6)

1. Institut fiziki metallov AN SSSR, Sverdlovsk.
(Germanium--Electric properties)   (Magnetic fields)

44506

S/181/63/005/001/030/064
B102/B186

AUTHORS: Zavadskiy, E. A., Kovrizhnykh, Yu. T., and Fakidov, I. G.

TITLE: Negative photoconductivity of germanium in a magnetic field

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1, 1963, 194 - 200

TEXT: The germanium photoconductivity was measured in the constant field of an electromagnet, as well as in an alternating field with a damping decrement of 4.0 and a frequency of 3 ko. In order to avoid intense quantum effects of the carriers, measurements at 20°K were made in fields of up to 14 koe, at 77°K up to 60 koe and at room temperature up to 200 koe. The samples were illuminated by a single pulse from an ИФК-120 (IFK-120) gas-discharge lamp. Photoconductivity was measured as described by E. A. Zavadskiy and I. G. Fakidov (FTT, 4, 1704, 1962). With three n-type samples and one p-type the following characteristics were measured: $\Delta\sigma_H/\sigma_H = f(H)$ at 77°K and at $\rho_T/\rho_c = 18.3, 10.6, 5.0$ and $2.0; \Delta\sigma_H/\sigma_H = f(\rho_T/\rho_c)$ at 20°K and at $H = 0, 1.65, 3.5, 6.7, 12.4,$ and 14.4 koe;

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Negative photoconductivity ...

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$\Delta\sigma_H/\sigma_H = f(1/H^2)$ at $77^\circ K$ and at $\rho_T/\rho_c = 4.9$, 1.25, 1.4 and 1.7; $(\Delta\sigma_H/\sigma_H)_\infty = f(\rho_T/\rho_c)$ at $77^\circ K$ for an n-type and a p-type sample; $(\Delta p/n_0)_0 = f(H^2)$ at 58 and $77^\circ K$. σ_H denotes the conductivity without illumination, ρ_T and ρ_c are the resistivities without and with illumination at $H = 0$; $(\Delta\sigma_H/\sigma_H)_\infty$ gives the saturation value (extrapolated to $H = \infty$); $(\Delta p/n_0)_0$ gives the position of the injection level. The results, showing that at high magnetic field strengths the photoconductivity is negative, are in good quantitative agreement with theory (Madelung, Z. Naturf., 8a, 791, 1953). The results correspond to impurity conductivity. For samples with mixed dark conductivity, negative photoconductivity can be observed only at higher field strengths. There are 6 figures and 1 table.

ASSOCIATION: Institut fiziki metallov AN SSSR, Sverdlovsk (Institute of the Physics of Metals AS USSR, Sverdlovsk)

SUBMITTED: July 26, 1962

Card 2/2

FOKINA, Ye.A.; ZAVADSKIY, E.A.

Effect of magnetic fields on martensite transformation in steel.
Fiz. met. i metalloved. 16 no.2:311-313 Ag '63.   (MIRA 16:8)

1. Institut fiziki metallov AN SSSR.
(Steel—Metallography)
(Magnetic fields)

ZAVADSKIY, E.A.; KOVRIZHNYKH, Yu.T.; FAKIDOV, I.G.

Photogalvanomagnetic effects in germanium in high magnetic fields.
Fiz. tver. tela 6 no.1:173-181 Ja '64.
(MIRA 17:2)

1. Institut fiziki metallov AN SSSR, Sverdlovsk i Sverdlovskiy go-
sudarstvennyy pedagogicheskiy institut.

L 14991-66   EWT(1)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)   IJP(c)   HJW/JD

ACC NR: AP5028570 (N)   SOURCE CODE: UR/0126/65/020/005/0793/0795

AUTHOR: Voronchikhin, L. D.; Zavadskiy, E. A.; Fakidov, I. G.

ORG: Institute of Physics of Metals AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: Superparamagnetism in austenitic steels

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 5, 1965, 793-795

TOPIC TAGS: austenitic steel, paramagnetism, magnetization, magnetic field, magnetic moment, metal physical property, metal physics

ABSTRACT: Superparamagnetism was studied in 40Kh2N20 and 50Kh2N22 austenitic steels in order to determine the average magnetic moments and dimensions of the local ferromagnetic ordering regions (clusters). Magnetization curves are given both for constant magnetic fields and strongly changing ones. Sample dimensions were 1 mm (diameter) and 10 mm (length). The data showed that the experimental portions of the magnetization curves, corresponding to the values of the fields causing martensitic transformation in these steels, can be described by the Langevir function

UDC: 669.15 : 538.22

Card 1/3

L 14991-66
ACC NR: AP5028570

$$\frac{7}{I_\infty} = \frac{\bar{\sigma}}{\sigma_\infty} = L\left(\frac{MH}{kT}\right), \qquad (1)$$

where k is Boltzman's constant, T is the absolute temperature, M is magnetic moment of the superparamagnetic particle and I_∞ is saturation magnetization of the sample. Satisfactory agreement of the experimental and calculated curves exhibit the utility of equation (1) for calculating the magnetic moments of particles. Two boundary cases were considered, corresponding to the conditions when $MH/kT < 1$ (weak field) and $MH/kT \gg 1$ (strong field). Equation (1) for the case when $MH/kT < 1$ reduces to

$$I = \frac{NM^2}{3k}\frac{H}{T},$$

where N is the number of particles per cm^3; for the case when $MH/kT \gg 1$, the following was applicable:

$$\frac{7}{I_\infty} = \frac{\bar{\sigma}}{\sigma_\infty} = 1 - \frac{kT}{M}\frac{1}{H}.$$

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L 14991-66

ACC NR: AP5028570

The average dimensions of the particles were calculated to be $d = 10$ angstrom. The conclusions substantiated the authors' hypothesis of the presence of paramagnetism in austenitic steels based on the calculated magnetic moments and the impossibility of attaining saturation even in fields as high as $150 \cdot 10^3$ oersteds. Orig. art. has: 3 figures.

SUB CODE: 11,20/   SUBM DATE: 30Jul65/   ORIG REF: 002/   OTH REF: 002

Card 3/3

ZAVADSKIY, D.A.; KOVRIZHNYKH, Yu.T.; FAKIDOV, I.G.

Galvanomagnetic effects in semiconductors with nonuniform
impurity distribution. Fiz. tver. tela 7 no. 12:3582-3587
D '65   (MIRA 19:1)

1. Institut fiziki metallov AN SSSR, Sverdlovsk.

ACC NR: AT6037050   SOURCE CODE: UR/0056/66/051/005/1317/1320

AUTHOR: Zavadskiy, E. A.; Fakidov, I. G.

ORG: Institute of Physics of Metals, Academy of Sciences SSSR (Institut fiziki metal-lov Akademii nauk SSSR)

TITLE: Magnetic properties of the compound Mn_3Ge_2 in strong magnetic fields

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 5, 1966, 1317-1320

TOPIC TAGS: manganese compound, germanium compound, magnetic property, magnetization, antiferromagnetism, magnetic moment

ABSTRACT: The purpose of the investigation was to determine the magnetic moment directly from measurements of the magnetization in the state of weak ferromagnetism. The tests were made in fields of intensity up to 300 kOe in the temperature interval from 370 to 77K. The measurements were made on polycrystalline samples using a pulsed magnetic balance and a piezoelectric pickup. The results showed a transition from the antiferromagnetic state to the state of weak ferromagnetism at the first critical point (160K). With increasing field, the transition temperature decreases. In the state of weak ferromagnetism, the dependence of the magnetization on the field is linear up to 50 kOe, after which saturation sets in. From the occurrence of the point of saturation it is found that at T > 100K the magnetic moment per manganese atom is 1.5 Bohr magnetons, whereas at lower temperatures a strong magnetic field causes

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ACC NR: AP6037058

transition from the antiferromagnetic state into a state with magnetic moment 2.3 Bohr magnetons per manganese atom. The change occurring in the magnetic structure of Mn_3Ge_2 in a strong magnetic field close to 100K is confirmed also by the temperature dependences of the magnetization and is accompanied by a change in the transition entropy by a factor 2.4. The authors thank V. N. Novogrudskiy for supplying the samples and N. I. Kuntsevich for help with the measurements. Orig. art. has: 3 figures.

SUB CODE: 20/   SUBM DATE: 02Jun66/   ORIG. REF: 007/   OTH REF: 002

Card 2/2

ZAVADSKIY, E.D.

USSR/Human and Animal Physiology - Physiology of Labor and   V-10
        Sports.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 18723

Author   : I.S. Kharshat, and E.D. Zavodskiy

Inst   : The Kiev Institute of Physical Culture.

Title   : The Effect of Rarefied Air on Certain Physiological Charac-
             teristics in Young Wrestlers.

Orig Pub : Tr. Kiyevsk. in-ta fiz. kul'tury, 1957, 2, 13-17

Abstract : No abstract.

Card 1/1

ZAVADSKIY, E.R.

Roadside planting in Transcarpathia. Avt.dor. 20 no.7:32 Jl '57.
(MIRA 10:10)

(Transcarpathia—Roadside improvement)

L 13600-66   EWT(m)

ACC NR: AP6001016   (A)   SOURCE CODE: UR/0286/65/000/022/0101/0101

AUTHORS: Isidorov, V. V.; Akunov, V. I.; Dubinskiy, M. G.; Zavgaski,
Desiakov, Yu. T.; Lur'ye, V. Yu.; M_____; N_____, H_____; _____, A.___;
Ryjin, V. N.; Sidochenko, I. M.; Sominskiy, D. S.; Titov, P. P.; Khalov, C. G.;
Shchovel', A. S.; Zavgorodniy, N. S.

ORG: none

TITLE: A reactor for combined pulverizing and burning of a material, such as cement,
in a high temperature gas stream. Class 80, No. 145469

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1965, 101

TOPIC TAGS: cement, thermal reactor

ABSTRACT: This Author Certificate presents a reactor for combined pulverizing and
burning of a material, such as cement, in a high temperature gas stream. To provide
automatic regulation of the burning and calcification time for the material in the
r_____ _____ _____ _ _____ ___ ____, lenticular chamber, nozzle
___ _____ _____ ___ __ __ ___ peripheral circle of the lenticular
chamber and at an angle to its radii. An opening in the center of the chamber bottom
is used to discharge the finished burned product.

SUB CODE: 18, 13/   SUBM DATE: 24May61

Card 1/1

SHERSHOV, Sergey Fedorovich, dotsent, kand.tekhn.nauk; PRUZNER, Saul
L'vovich, dotsent, kand.tekhn.nauk; ZAVADSKIY, Ivan Mikhaylovich,
dotsent; MELIDOV, I.Ye., red.; BORUNOV, N.I., tekhn.red.

[Economics and organization of power production] Ekonomika i
organizatsiia energeticheskogo proizvodstva. Pod obshchei red.
S.F.Shershova. Moskva, Gos.energ.izd-vo, 1959. 463 p.
(MIRA 13:2)

(Power engineering)

ZAVADSKIY, I. M.

(Dotsent, Moscow Power Inst.)

"Dynamics of the Main Economic Indices of Power Economy,"
report presented at the All-Union Sci. Technical Conference on Economy of Fuel
and Electric Power in the Engineering Industry, December 1957, Moscow.

Promyshlennaya Energetika, 1958, vol. 13, No. 3, pp. 33-35
     (see author card for GORIN, F. I.)

ZLATOPOL'SKIY, A.N.; ZAVADSKIY, I.M.; PRUZNER, S.L.

"Effective use of secondary power resources" by N.M.
Vilenskii. Reviewed by A.N.Zlatopol'skii, I.M.Zavadskii,
S.L.Pruzner. Prom.energ. 19 no. 4:60-61 Ap '64. (MIRA 17:5)

ZAVADSKIY, I.M.

Methods and practice for calculating the cost of steam produced
by reclamation boilers. Nauch.dokl.vys.shkoly; energ. no.3:121-
125 '58.   (MIRA 12:1)

1. Rekomendovano kafedroy ekonomiki energetiki Moskovskogo
energeticheskogo instituta.
                          (Boilers)

ZAVADZKIY, K.

POLAND/Cultivated Plants - Technical. Oleaginous. Sugar-Bearing.   L-5

Abs Jour   : Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69336

Author   : Zavadzkiy, K.
Inst   :
Title   : The Content of Citric Acid in Tobacco and Makhorka.

Orig Pub   : Acta agrobot., 1956, 4, 3-11

Abst   : Analyses of different specimens of tobacco and makhorka
cultivated in Poland have shown that the largest quan-
tity of citric acid is accumulated in makhorka and the
smallest in tobacco. As the plant grows and develops,
the rate of citric acid accumulation increases. As the
quality of cigarette tobaccos worsens, the content of
citric acid increases and the quantity of nicotine de-
creases.

Card 1/1

ZAVADSKIY, I.S.

ORLOV, V.P., kand.sel'skokhoz.nauk. Prinimali uchastiye: AVROV, N.N.;
BASENKO, P.V.; VARLAMOV, D.A.; VASIL'YEV, I.I.; VLASOV, V.N.;
VYLEGZHANINA, V.A.; ZHIVET'YEV, V.G.; ZAVADSKIY, I.S.; ZALESSKIY,
Ye.Ya.; ZAKORYUKIN, D.S.; ISHCHENKO, I.N.; KACHIBAYA, I.D.; KISE-
LEV, Ye.S.; KOZHEVNIKOV, I.Z.; LISITSYN, V.I.; MESHCHERYAKOV, V.F.;
NYURIN-VERTSBERG, R.L.; PEREPELITSA, V.M.; RYABKOV, A.D.; SKURIKHIN,
I.P.; SOLOV'YEV, N.A.; YAS'KO, N.G.. GREBTSOV, P.P., red.; ZUBRILINA,
Z.P., tekhn.red.

[Our farms in 1965] Nashi khoziaistva v 1965 godu. Moskva, Gos.
izd-vo sel'khoz.lit-ry, 1959. 230 p.   (MIRA 13:2)
                        (Agriculture)

LANGUROV, I.Z., kand. tekhn.nauk; ZAVADSKIY, K.I., inzh.; GALLE,
A.G., inzh., retsenzent; KRICH, B.V., inzh., retsenzent;
PANKOV, A.M., inzh., retsenzent; SHISHLYKOV, Ye.S., inzh.,
red.; USENKO, L.A., tekhn. red.

[Organization of the transportation of bulk liquid cargo]
Organizatsiia perevozok nalivnykh gruzov. Moskva, Transzhel-
dorizdat, 1963.   269 p.   (MIRA 16:4)
  (Tank cars)   (Railroads--Freight)

ZAVADSKIY, K.I., inzh.

What are the advantages of the specialization of tank cars?
Zhel. dor. transp. 46 no.10:25-26 O '64.   (MIRA 17:11)

ZAVADSKIY, K.A.

Growth (Plants)

Significance of OB lepeshinskay's ideas for the problems in plant development. Vest. Len.un
6 No. 11, 1951

Monthly List of Russian Accessions. Library of Congress, September, 1952 Unclassified

1. ZAVADSKIY K.M.

2. USSR (600)

4. Species, Origen of

7. Progressive importance of the views of V.L. Komarov on the reality and completemess of species, Vest.Len un. 7 no.4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, unclass.

ZAVADSKIY, K.M.

V.I. Lenin on the demand for "diversity" in research and some violations
of this demand in biology. Vest.Len.un.9 no.1:3-20 Ja '54. (MLRA 9:7)
                              (Biology)

ZAVADSKIY,K.M.

Conception of the transition of "old" inherited traits to "new"
Vest. Len. un. 9 no.4:3-16 Ap. '54.   (MIRA 8:6)
(Transmutation of plants)

ZAVADSKIY,K.M., dotsent, rukovoditel' seminara.

Some problems in the theory and the formation of species. Vest.
Len.un. 9 no.10:3-15 O '54.   (MIRA 8:7)

1. Zaveduyushchiy kafedroy darvinizma
                              (Origin of species)

ZAVADSKIY, K.M.

SHISHKIN, B. K., professor; ROMANKOVA, A. G., kandidat biologicheskikh nauk, starshiy naychnyy sotrudnik; MARKOV, G. S., doktor biologicheskikh nauk dotsent; DANILEVSKIY, A. S., Kandidat biologicheskikh nayk, dotsent; SHTEYNBERG, D. M., doktor biologicheskikh nauk; LOMAGIN, A. G. aspirant; SELL'-BEKMAN, I. Y., mladshiy naychnyy sotrudnik; ZHINKIN, L. N., doktor biologicheskikh anuk, professor; IPATOV, V. S., student V kursa; KOZLOV, V. Ye., kandidat biologicheskikh nayk, starshiy nauchnyy sotrudnik; KARTASHEV, A. I. kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; NITSENKO, A.A, STARSHIY NAychnyy so-trudnik; VASILEVSKAYA, V. K., doktor biologicheskikh nauk, dotsent; RYUMIN, A. V., kandidat biologicheskikh nauk; NAUMOV, D. V., Kandidat biologicheskikh nauk, mladshiy nauchnyy sotrudnik; KHOZATSKIY, L. I. kandidat biologicheskikh nauk, dotsent; GOROBETS, A. M., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; GODLEVSKIY, V. S., assistent; GERBIL'SKIY, N. L., doktor biologicheskikh nauk, professor; Aleksandrov, a. d., professor; KOLODYAZHNYY, V. I.; TURBIN, N. V.; ZAVAD-SKIY, K. M.

[Theory of species and the formation of species]. Vest. Len un. 9 no. 10:43-92 O '54.   (MLRA 8:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin, Aleksandrov)

(Continued on next card)

SHISHKIN, B.K., professor; ROMANKOVA, A. G., Kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik, and others.

/Theory of species and the formation of specirs7. Vest. Len. un. 9 no. 10:43-92 O '54.
(MLRA 8:7)

2. Leningradskiy gosudarstvennyy universitet (for Shishkin, Romankova, Markov, Ipatov, Kozloz, Kartashev, Godlevskiy, Gerbil'skiy, Aleksandrov) 3. Zoologicheskiy institut Akademii nauk SSSR (for Shteynberg, Naumov) 4. Kafedra entomologii "eningradskogo gosudarstvennogo universiteta (for Danilevskiy). 5. Kafedra darvinizma Leningradskogo gosudarstvennogo universitete (for Lomagin, Gorobets). 6. Kafedra geobotaniki Leningrad-skogo gosudarstvennogo universiteta (for Nitsenko). 7..Kafedra botaniki Leningradskogo gosudarstvennogo universiteta (for Vasilovskaya). 8. Ka-fedra zoologii pozvonochnykh Leningradskogo gosudarstvennogo universi-teta (for Khozatskiy). 9. Leningradskoye otdeleniye Vsesoyuznogo in-stituta udobreniy, agropochvovedeniya i agrotekhniki (for Sell'-Bekman) 10. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR (for Zhinkin)

(Origin of species)

ZAVADSKIY, K.M.

Causes of the dying out of plants in hill plantings of varying density in relation to sizes of hills and conditions of mineral ferfilizing. Bot.zhur. 39 no.4:515-544 Jl-Ag '54.   (MLRA 7:10)

1. Leningradskiy Gosudarstvennyy universitet im. A.A.Zhdanova.
   (Field crops) (Growth (Plants))

ZAVADSKIY, K. [M.]

Letter to the editor of "Botanicheskii zhurnal." Bot.zhur. 39 no.4:
635 Jl-Ag '54.   (MLRA 7:10)
       (Cells) (Botany--Physiology)

ZAVADSKIY, K.M.

Scientific legacy of I.V.Michurin and some problems of biology.
Bot.zhur.41 no.1:3-22 Ja '56.   (MLRA 9:6)

1.Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova.
(Michurin, Ivan Vladimirovich, 1855-1935)

ZAVADSKIY, K.M.

Overpopulation and its role in evolution. Bot.zhur. 42 no.3:426-449
Mr '57.   (MIRA 10:5)
(Evolution) (Plants, Space arrangement of)

ZAVADSKIY, K.M.

Object and problems of modern Darwinism. Bot.zhur. 42 no.4:583-595
Ap '57.   (MLRA 10:5)
                        (Evolution)

ZAVADSKIY, K.M.

Category: USSR/General Biology. Evolution.   B-7

Abs Jour: Referat Zh.-Biol., No 6, 25 March 1957, 21001

Author : Zavadskiy, K.M.
Inst   : not given
Title   : Some problems concerning the theory of species and origin
          of species.

Orig Pub: Vestn. Leningr. un-ta, 1954, No 10, 3-15

Abstract: It is pointed out that it is insufficient to study species
          only from the morphological-geographical point of view. A
          full characterization of species, in the author's view, must in-
          clude 10 factors (organization, quantity, reproduction, discrete-
          ness, expansion, life niche, historicity, stability, diversity,
          completeness). The author believes that T.D. Lysenko and his
          followers base themselves on a simplified concept of species.
          From this follow their basic errors, particularly, the identi-
          fication of individual variability with the historical process

Card   : 1/2   -1-

Category: USSR/General Biology. Evolution.   B-7

Abs Jour: Referat Zh.-Biol., No 6, 25 March 1957, 21601

of origin of species. It is emphasized that attempts to explain
the supposedly observed transformation of specimens of one spe-
cies into another proved worthless. Ordinarily, it is not taken
into account that the species indices are closely interrelated
and present a single totality. The formula of assimilation of
life conditions by the organism does not explain how complica-
ted adaptations could arise as a result of sudden changes. It
is noted that the assertion that the concept of species and
origin of species supposedly had a great national economic sig-
nificance proved to be unfounded. The discussion brought out
that the problem of methods in proving the new theory of origin
of species by their adherents was underestimated and showed in-
correct methods in their struggle with representatives of other
points of view.

Card   : 2/2   -2-

ZAVADSKIY, K.M.

Differentiation of species in higher plants [with summary in English]. Vest. LGU 12 no.21:18-44 '57.   (MIRA 10:12)
(Botany--Variation)

Zavadskiy, K.M.

USSR / General Biology. Evolution

B-7

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 356

Author   : Zavadskiy, K.M.

Inst   : Not Given

Title   : Subject and Problems of Contemporary Darwinism. A Discussion

Orig Pub : Botan. zh., 1957, 42, No 4, 583-595

Abstract : Darwinism (D) in a narrow sense is a doctrine by Ch. Darwin of
           evolution based on natural selection; in a broad sense it is
           a science of general laws governing historical development of
           living nature. As new progress was created in the field of
           biology (evolutionary morphology, ecology, genetics and others)
           the subject matter of D was changed. Contemporary D is a
           direct continuation and natural development of Darwinian doc-
           trine, but it synthesizes an enormous quantity of new facts
           and conclusions. The subject of D is the study of natural
           selection as a single historical process which stems from a
           base of joint and connected action of all its factors. The

Card   : 1/3

USSR / General Biology. Evolution

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 356

basic problem consists of correct understanding of the cor-
relation of single evolutionary factors. A brief characteri-
zation of the struggle for D is given, and its corroboration
in all branches of biology, among them in genetics. The au-
thor criticizes the terms "contemplative D", "creative D",
Michurin D" which appear in the literature, and points out
that Darwin's theory never was contemplative and that authors
who declared the birth of "creative D" often departed from
D in general. The work of I.V. Michurin is a massive contri-
bution to D development, but it cannot serve as a basis for
acknowledging a special science. The general problems facing
D are enumerated: the unfloding of experimental study of all
links in the process of natural selection; the development
of theoretical studies on basic problems of evolution and
development of methods on managing the evolutionary process;
intensifying criticism of idealistic views and further develop-
ment of dialectic-materialistic bases of D. A number of con-
crete problems of D are also indicated (on limitation, forms,
tempo and direction of natural selection; on interrelation
between selection and the direction of hereditary changes,
etc.). A reasoned conclusion is arrived at as to the neces-

Card   : 2/3

USSR / General Biology. Evolution   B-7

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 356

         sity of existence and further development of D as a special
         science on general laws of evolution, which is of great
         significance in formation of a materialistic view of the world.

Card   : 3/3

ZAVADSKIY, K. M.; GOROBETS, A. M.; KHOD'KOV, L. Ye.; KHAKHINA, L. N.

Some results of the study on the populations of higher plants.
Trudy PBI no.19:17-34 '62.   (MIRA 16:1)

1. Laboratoriya evolyutsii populyatsiy Petergofskogo
biologicheskogo instituta.

(Plant populations)

ZAVADSKIY, K.M.

Work of the Department of Darwinism. Vest LGU 16 no.21:150-
155 '61.   (MIRA 14:11)

(Plants--Evolution)

ZAVADSKIY, Kirill Mikhaylovich; SINSKAYA, Ye.N., doktor biol.nauk, doktor
    sel'khoz. nauk, otv. red; PETROVICHEVA, O.L., red.; VODOLAGINA, S.D.,
    tekhn. red.

    [Studies on species] Uchenie o vide. Leningrad, Izd-vo Leningr. univ.,
    1961.   253 p.   (MIRA 14:12)
                            (SPECIES)

ZAVADSKIY, K. M.

B-6

USSR / General Biology. Evolution.

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81099.

Author : Zavadsky, K. M.
Inst   : Not given.
Title   : The Problem of Species Differentiation in Higher
          Plants.

Orig Pub: Vestn. Leningr. un-ta, 1957, No 21, vyp. 4,
          18-44.

Abstract: In contemporary literature, different points
          of view exist on the structure of species (S).
          Any single representation of the S content,
          which could be applied to all groups of living
          organisms, does not exist, and attempts to
          find such a species "pattern" of a universal
          significance would lead to great confusion.
          The author proposed to proceed from the premise

Card 1/5

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B-6

USSR / General Biology. Evolution.

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81099.

Abstract: that, in reality, S are not equivalent to each other in content and may have a different structure. S is conceived to be a method of organization and a unit of living nature, a breeding community, capable of prolonged self-production and environmental adaptation, capable of independent historical development and of having a good many other basic aspects. Investigations were made, on the basis of which originate the contemporary representation of S in the discovery of the natural character in the variety of individuals within the limits of S; the decomposition of S by X-ray methods into elemental form; the complex study of populations as complete formations. Notwithstanding the recognition of complicated intra-species differentiation, there

Card 2/5

USSR / General Biology. Evolution.

B-

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81099.

Abstract: does not exist as yet a universal system of
classification of intra-species units. On the
basis of comparison of a series of morphologi-
cal, geographic and ecologically-genetic sys-
tems, a conclusion was arrived that the natural
dismemberment of S corresponds more closely to
the systems of classification, submitted by Sin-
skaya, as well as by Clausen. The indigenous
(local) population was acknowledged to be the
elementary structural unit of S, and given its
identification. The problem of composition and
structure of the indineous population was exam-
ined. In this connection, opinions were criti-
cally analyzed, in accordance with which the
smallest structural unit of S is acknowledged
to be not the indigenous population, but the

Card 3/5

24

USSR / General Biology. Evolution. B-6

Abs Jour: Ref Zhur-Biol., No 18, 1958, 81099.

Abstract: ment. The morphobiological groups are repro-
duced by the population in different ways, and
sometimes appear, in a considerable degree, as
self-productive units. In complex populations,
their structure in the optimum state is safe-
guarded by three apparatuses: populationally-
genetic, individually-physiologic (modificative
and inductively-sequential.

Card 5/5

25

ABSTRACT: A comparison of 476 random-selected Shigella flexneri and sonnei strains, isolated in Czechoslovakia, Hungary, and Poland, showed that they possessed general resistance to the antibiotics chloramphenicol, streptomycin, terramycin, and tetracycline, and to sulfonamides. Of all strains tested and compared only four, while resistant to two antibiotics (one in Czechoslovakia to chloramphenicol and streptomycin, and three in Hungary and Poland to tetracycline and streptomycin), were sensitive to sulfonamides. All remaining strains were sulfonamide-resistant.

ZAVADSKIY, M. A.

Geology

"Oil Well Casing", Gostoptekhizdat, 1946

Summary No. 60, 26 May '52. BR 52056899

ZAVADSKIY, N. A.

The coal of southern Kazakhstan. Alma-Ata Kazakstanskoe kraevoe
izd-vo, 1935. 57 p. maps. (50-40917)

TN809.R92K39

ZAVADSKIY, Nikolay Antonovich

[Late consequences and complications of penetrating wounds of the skull and brain] Otdalennye posledstviia i oslozhneniia pro-nikaiushchikh ranenii cherepa i mozga. Kirov, Kirovskoe knizhnoe izd-vo, 1956.   134 p.   (MIRA 13:9)
                   (BRAIN--WOUNDS AND INJURIES)

ZAVADSKIY, N. A.   Cand. Med. Sci.

Dissertation: "Materials on the Diagnosis of Posttraumatic Abscesses of
                Brain."

2/2/50
Acad. Med. Sci. USSR

SO Vecheryaya Moskva
        Sum 71

EXCERPTA MEDICA Sec.11 Vol.10/10 Oto-Rhino--

ZAVADSKY N. B.

1897. ZAVADSKY N.B. Simpferopol. *A change in the histological

1897

structure of ear polypi caused by X-ray treatment (Russian text) VESTN. OTO-RINO-LARING. 1957, 3 (38-41). Observations on 111 cases of chronic suppurative epitympanitis indicate that, along with the generally accepted methods of treatment, local X-ray irradiation is effective. To follow up histological changes in the tissues of the middle ear treated by X-ray irradiation, parts of the polypi in 10 patients were removed from time to time during the treatment. Firstly the oedema of the tissues is marked by increased cellular infiltration and a swelling of the endothelial cells of the vessels with phenomena of fibroid necrosis. Then sclerosis develops. These phenomena depend very little on the dose used.

(XI, 5, 14, 16)

ZAVADSKIY, N.B

EXCERPTA MEDICA   Sec.14   Vol.11/11 Radiology   Nov 57.

1906. ZAVADSKY N. B. Simpferopol. *A change in the histological structure of ear polypi caused by X-ray treatment (Russian text) VESTN.OTO-RINO-LARING. 1957, 3 (38-41) Observations on 111 cases of chronic suppurative epitympanitis indicate that, along with the generally accepted methods of treatment, local X-ray irradiation is effective. To follow up histological changes in the tissues of the middle ear treated by X-ray irradiation, parts of the polypi in 10 patients were removed from time to time during the treatment. Firstly the oedema of the tissues is marked by increased cellular infiltration and a swelling of the endothelial cells of the vessels with phenomena of fibroid necrosis. Then sclerosis develops. These phenomena depend very little on the dose used.

(XI, 5, 14, 16)

ZAVADSKIY, N.P.

Effect of conditions during stockpiling on the thermal behavior
of the coal pile. Izv.AN Kazakh.SSR.Ser.khim.no.9:130-133 '56.
(Coal--Storage)
(MIRA 9:7)

ALEKSEYEV, Ye.T.; APENCHENKO, S.S.; BASOV, A.P.; BAUSIN, A.F.; BIRSHADSKIY, L.S.;
VELLER, M.A.; GINZBURG L. N.; GUSEV, S.A.; DANILOV, G.V.; DOLGIKH, M.S.;
DRUZHININ, N.H.; YEFIMOV,V.S.; ZAVADSKIY, N.V.; IVASHFCHIN, N.V.;
KARAKIN, F.F.; KUZHMAH, G.I.; LOBANOV, S.P.; MERKULOV, Ye.V.;NIKODIMOV,
P.I.; PANKRATOV, N.S.; PYATAKOV, L.V.; RODICHEV, A.F.; SHIRNOV, N.S.;
STRUKOV, B.I.; SAVOCHKIN, S.M.; SAMSONOV, N.N.; SINITSYN, N.A.;SOKOLOV,
A.A.; SOLOPOV, S.G.; CHELYSHEV, S.G.; SHCHEPKIN, A.Ye.

Fedor Nikolaevich Krylov; obituary. Torf. prom. 35 no.6:32 '58.
(MIRA 11:10)
(Krylov, Fedor Nikolaevich, 1903-1958)

ZAVADSKIY, N.V.

ZAVADSKIY, N.V.

Histological changes of ear polypi induced by X-ray treatment [with summary in English]. Vest.oto-rin. 19 no.3:38-41 My-Je '57.

(MIRA 10:10)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. - prof. A.M.Reynus) Krymskogo meditsinskogo instituta.

(EAR, MIDDLE, neoplasms

polypi, histol. changes after x-ray ther.)

(POLYPI, pathol.

middle ear, histol. changes after x-ray ther.)

USSR/Human and Animal Morphology - Normal and Pathological.   S
       Sense Organs.

Abs Jour   : Ref Zhur Biol., No 11, 1958, 50404

Author   : Zavadskiy, N.V.
Inst   :
Title   : A Change in the Histological Structure of Ear Polypi
       Caused by X-Ray Treatment

Orig Pub   : Vestn. oto-rino-laringologii, 1957, No 3, 38-41

Abstract   : Histological changes of ear polypi in 10 patients with
       chronic purulent epitympanites were studied. 5-7 days
       after the start of irradiation (total dose by this time
       was 75-200 r.), an intensification of the edema of con-
       nective tissue of the polypus, an increase of cellular in-
       filtration, a swelling of the endothelium of the capilla-
       ries, and sometimes disturbance of the structure of the
       vascular wall with symptoms of fibrinoid necrosis were
       noted. 25-30 days after irradiation the infiltrations

Card 1/2

ZAVADSKIY, N. V.:

ZAVADSKIY, N. V.: "The use of X-ray irradation in treating patients with chronic suppurative epitympanitis". Simferopol', 1955. Crimean State Medical Inst imeni Stalin. (Dissertations for the Degree of Candidate of Medical Sciences.)

So. Knizhnaya letopis'. No. 49, 3 December 1955. Moscow.

ZAVADSKIY, V.

USSR (600)

Automobile Drivers

Work practice of Stakhanovite driver I. T. Pavinskii. Sakh. prom. 26 No. 8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, __November__ 1958, Uncl.

2

ZAVADSKIY, V.

USSR (600)

Beets and Beet Sugar - Transportation

Work practice of Stakhanovite driver I.T. Pavinskii. Sakh. prom. 26 no. 8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November, 1958, Uncl.

2

ZAVADSKIY, V.

Moscow belt-line highway. Za rul. 19 no.11:8-9 N '61.
(MIRA 14:12)

1. Glavnyy inzhener proyekta i stroitel'stva Moskovskoy
kol'tsevoy avtomobil'noy dorogi.
(Moscow--Express highways)

ZAVADSKIY, V.

Begin with the small. Sov. profsoiuzy 19 no.17:22-23 S '63.

(MIRA 16:11)

1. Organizator professional'noy gruppy poshivochnogo tsekha obuvnoy fabriki No.1, Kiyev.

PATON, B.Ye.; ZAVADSKIY, V.A.

Measuring unit of circuit diagrams with ignitron interrupters. Avton.svar.
11 no.12:3-11 D '58.
(MIRA 12:1)

1. Ordena Trudovogo Krasnogo Znameni Institut elektorsvarki imeni Ye.O.
Patona AN USSR.
(Electric welding) (Voltmeter)

ZAVADSKIY, V.A.

Measurements of the effective values of the current of resistance
welding machines with ignitron interrupters. Avtom. svar. 17 no.3:
9-12 Mr '64.   (MIRA 17:11)

1. Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.

ZAVADSKIY, V.A.

Characteristics of the distribution of petroleums in the Volga-
Ural area. Trudy VNIGRI no.117:222-233 '58.   (MIRA 12:4)
          (Volga Valley--Petroleum geology)
          (Ural Mountain region--Petroleum geology)

ZAVADSKIY, V. A.

Subject	: USSR/Engineering	AID P - 858
Card 1/1	Pub. 11 - 4/13	
Authors	: Paton, B. Ye. and Zavadskiy, V. A.	
Title	: The impulse arc ignition considerably lowers the voltage of the welding transformer	
Periodical	: Avtom. svar., #4, 46-52, Jl-Ag 1954	

Abstract   : The use of impulse ignition is offered for lowering the open-circuit voltage of the welding transformer, connected either in series or parallel with the impulse generator. The welding circuit is adjusted for automatic control of the welding arc. Three circuit diagrams, 9 oscillograms and 3 Russian references (1950-1954).

Institutions: Institute of Electric Welding im. E. O. Paton Academy of Sciences, Ukrainian SSR

Submitted   : My 10, 1954

PATON, B.Ye.; ZAVADSKIY, V.A.

New diagram for ignitron starting in resistance welding machines.
Avtom. svar. 11 no.7:48-51 Jl '58.   (MIRA 11:9)

1.Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.
Ye. O. Patona AN USSR.
            (Electric welding--Equipment and supplies)

AUTHOR: Paton, B.Ye., and Zavadskiy, V.A.   125-58-7-8/14

TITLE: A New Ignition Circuit of Ignitrons in Contact Welding
                Machines (Novaya skhema zazhiganiya ignitronov v mashinakh
                dlya kontaktnoy svarki)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 7, pp 48-51 (USSR)

ABSTRACT: A new circuit of independent ignitron ignition is suggested
                which does not require the use of lead resistances. The square
                shape of the voltage curve of the current feeding the ignitron
                igniter circuit is obtained by the use of a ferro-resonance
                circuit. This ensures a continuous magnitude and shape of
                the current pulse in the ignition circuit. The described method
                was tested with good results in butt flash welding. It is sug-
                gested that this circuit be used in other contact welding
                machines equipped with ignitron interrupters.
                There are 2 circuit diagrams, 1 oscillogram, and 1 Soviet
                reference.

ASSOCIATION: Institut elektrosvarki imeni Ye.O.Patona AN USSR (Institute
                of Electric Welding imeni Ye.O. Paton, AS UkrSSR)

Card 1/2

A New Ignition Circuit of Ignitrons in Contact Welding Machines   125-58-7-8/14

SUBMITTED: March 28, 1958

1. Resistance welding machines—Control systems   2. Ignitrons—Circuits
3. Electric igniters—Applications

Card 2/2

ZAVAdSKiy, V.A.

PHASE I BOOK EXPLOITATION SOV/1897

Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut.

O proiskhozhdenii nefti v kamennougol'nykh i permskikh otlozheniyakh Volgo-Ural'skoy oblasti; sbornik statey (Origin of Petroleum in the Carboniferous and Permian Sediments of the Volga-Ural District; Collection of Articles) Leningrad, Gostoptekhizdat, 1958. 283 p. (Series: Its: Trudy, vyp. 117) Errata slip inserted. 1,500 copies printed.

Ed.: Kinzidy L'vovny Eare. Ed.: E.A. Dayev; Tech. Ed.: L.M. Gammal'yeva.

PURPOSE: This book is intended for geologists and geochemists, particularly those interested in questions dealing with the origin, development, and structure of oil deposits.

COVERAGE: This collection of articles deal with the Carboniferous and Permian sediments of the Volga-Ural district and methods of determining possible petroleum source-beds. The lithologic and geochemical characteristics of the sediments are discussed as are the conditions of oil deposition. The author thanks the following geologists working in the Second Baku area: A.Z. Bakirov, L.F. Zozov, K.B. Ashirov, I.L. Panin, A.M. Mel'nikov, S.P. Yegorov, and I.A. Apol'man. Further thanks are extended to Professor A.F. Dvali for his advice and encouragement. References accompany each article.

Origin of Petroleum (_____)

Petrova, Yu.N., I.P. Karyova, I.P. Kuzmicha. Organic matter in the Upper Paleozoic Beds of the Volga-Ural Region ... 115

Kotina, A.K., Ye.M. Guldacheva. Certain Characteristics of the Oils in the Volga-Ural Region ... 151

Desenkova, P.Ya., L.S. Zakharenkova, and A.P. Kurbatskaya. The Relationship Between Vanadium and Nickel and the Components of the Oils of the Volga-Ural Region ... 186

Simakova, T.L., and E.A. Lunova. The Study of Microflora in the Oil Deposits of the Second Baku ... 213

Zavadskiy, V.A. Certain Regularities in the Distribution of Microflora in the Volga-Ural Region ... 222

Posner, V.M. Certain Features of the Development of the Structural-tectonic Pattern in the Middle and the Upper Paleozoic of the Volga-Ural region and the Western Slope of the Urals ... 234

Card 2/3

Origin of Petroleum (Cont.) SOV/1897

Mayskiy, B.N. The possibility of outlining the oil-bearing units in a Cross-section of the Carboniferous and Permian of the Volga-Ural region ... 252

AVAILABLE: Library of Congress

RV/nb
6-22-59

SOV/125-59-12-3/18

25(1)

AUTHORS: Paton, B.Ye. and Zavadskiy, V.A.

TITLE: Some Peculiarities of Welding Current Control Systems
             with Ignitron Interrupters

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 12, pp 22-27 (USSR)

ABSTRACT: Peculiarities of the systems mentioned in the title are
             considered and the expediency is shown of analyzing the
             operation of these systems with the use of "control
             characteristics", which determine the interdependence
             between the welding voltage and the ignition angle of the
             ignitrons. The dynamic and static properties of the
             systems are analyzed. The conclusion is drawn that
             statical regimes corresponding to the equilibrium of the
             welding current control system and the ignitron breaker
             are easily analyzed with the aid of the control charac-
             teristics of the welding machine and the statical
             characteristics of the current regulator. The loss of
             control by the ignitrons each half-period has a sub-
             stantial influence on the dynamic properties of the

Card 1/3

SOV/125-59-12-3/18

Some Peculiarities of Welding Current Control Systems with Ignitron
Interrupters

system. To make an automatic control which would fully
work off the disturbances in the half-period following
their appearance it is necessary to use rather complicated
and quick-working parts for the computing devices. During
the half-period, these parts must accurately determine the
necessary ignition angle of the ignitron. Sufficiently
high dynamic properties of the control can be obtained by
the introduction of an inertial link. The magnitude of
the time constant of this link depends on the amplifica-
tion coefficient of the control, the permissable mis-
match and the work section of the control characteristic.
There are 4 graphs.

ASSOCIATION: Ordena trudovogo krasnogo znameni Institut elektrosvarki
im. Ye. O. Patona AN UkrSSR (Order of the Red Banner of
Labor, Institute of Electric Welding Imeni Ye. O. Paton

Card 2/3   of the AS UkrSSR).

SOV/125-59-12-3/18

Some Peculiarities of Welding Current Control Systems with Ignitron Interrupters

SUBMITTED: October 23, 1959.

Card 3/3

ZAVADSKIY, V.A.

Data on the paleoecology of the upper Devonian brachiopods of the western Urals. Sbor.nauch.rab.stud. LGI   no.2:9-12 '57.   (MIRA 13:4)

1. Leningradskiy ordenov Lenina i Trudovogo Krasnogo Znameni gornyy institut im. G.V.Plekhanova. Predstavleno kand.geologo-mineralog. nauk N.Ya. Spasskim.
        (Ural Mountains--Brachipoda, Fossil)

AUTHORS: Paton, B.Ye. and Zavadskiy, V.A.   SOV/125-58-12-1/13

TITLE: A Measuring Device for Circuits With an Ignitron Breaker (Iz-
                meritel'nyy organ skhem s ignitronnym preryvatelem)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 12, pp 3-11 (USSR)

ABSTRACT: Various systems for measuring effective current values and
                voltages are analyzed. A circuit of a measuring device is
                suggested consisting of a non-linear active resistance in
                the form of an electronic tube and capacitance. The input
                voltage feeds the anode circuit of the tube, and the re-
                sistance switched in the tube grid is a variable parameter.
                The use of one, two or four triodes increases the admissible
                changes of voltage from 50 to 200 v. The advantage of the
                system is the possiblity of changing the characteristics
                with the use of grid resistance. The measuring device can
                measure effective values of the input voltage with changes
                of the ignitron ignition angles from 30 to 150°. The device
                can be recommended for automatic control of circuits and for
                measuring the effective value of welding currents in con-
                tact machines.

Card 1/2   There are 8 sets of circuit diagrams and 5 graphs.

SOV/125-58-12-1/13

A Measuring Device for Circuits With an Ignitron Breaker

ASSOCIATION: Institut elektrosvarki imeni Ye.O. Patona AN USSR (The In-
               stitute of Electric Welding imeni Ye. O. Paton, AS Ukr SSR)

SUBMITTED: October 21, 1958

Card 2/2

PATON, B.Ye.; ZAVADSKIY, V.A.

Pulse method of arc striking in shielded and manual arc welding.
Avtom.svar.9 no.3:26-35 My-Je '56.   (MIRA 9:9)

1.Ordena Trudovoge Krasnego Znameni Institut elektrosvarki imeni
Ye.O.Patona AN USSR.
                    (Electric welding)

29049
s/125/61/000/010/009/014
D040/D112

I.2300

AUTHOR: Zavadskiy, V.A.

TITLE: Seam-welding telescopic pipe joints of 1Kh18N9T steel

PERIODICAL: Avtomaticheskaya svarka, no. 10, 1961, 74-77

TEXT: Welding experiments were conducted with a modified МШПТ-50 (MShPT-50) resistance welder in view of frequent weld defects, i.e. reduced weld core or a gap at the closing point of the annular seam, occurring during the welding of thin-wall pipes of 1Х18Н9Т (1Kh18N9T) steel with the use of a backing copper insert (Fig. 1). The cause of the defects was unequal deformation of the pipes and the formation of a gap between the pipe walls in front of the welding roller, resulting from the unequal heating of the pipes, which in turn was due to the difference in contact surface area between the outer roller and outer pipe and the inner roller and the inner pipe. Besides, the pressure exerted by the rollers was insufficient to close the gap. Calculation proves that equal contact areas of the outer and inner rollers are obtained when

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$$\frac{1}{R_2} - \frac{1}{R_4} = \frac{1}{R_3} + \frac{1}{R_1} \quad ,$$

where R_1 is the radius of the outer roller; R_2 - the radius of the inner roller; R_3 - the external radius of the outer pipe; R_4 - the internal radius of the inner pipe (Fig. 2). The design of the new MShPT-50 welder is described and illustrated in a photograph and a cross-sectional diagram. It includes a chain drive for the outer roller, and water cooling. Welding was carried out with a 35.5÷41 amp current in the primary winding in the transformer, 160 kg compression effort, a welding pulse time of 3T and an interval time of 10T, a welding speed of 160 mm/min, an outer roller 210 mm and an inner roller 20 mm in diameter, and a 4 mm work surface width on the rollers. The welds were sound and the depth of the core amounted to 50÷70% of the total thickness of the pipe walls. It is suggested to improve the ignition stability of the ignitrons by connecting an RC circuit (Fig. 8)

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Seam-welding telescopic...

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D040/D112

with a 10 ohm resistance and 6-10 μ.f capacitance in parallel to the pri-
mary winding of the welding transformer. The following conclusions are
drawn: (1) the diameters of the inner and outer rollers must be so chosen
so as to produce equal initial contact areas between them and the inner sur-
faces of the pipes; (2) mechanical drive is necessary for both rollers;
(3) it is advisable to use an RC circuit in the welding circuit. There are
8 figures.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.
                Ye.O. Patona AN USSR (Electric Welding Institute "Order of
                the Red Banner of Labor" im. Ye.O. Paton of the AS UkrSSR)

SUBMITTED: February 23, 1961

Card 3/4

ZAVADSKIY, V.A.

Seam welding of telescopic joints in 1Kh18N9T steel pipe.
Avtom. svar. 14 no.10:74-77 O '61.   (MIRA 14:9)

1. Ordena Trudovog Krasnogo Znameni Institut elektrosvarki
imeni Ye.O. Patona AN USSR.
            (Pipe, Steel—Welding)

ZAVADSKIY, V.V.

Using hot water for the heat supply of a petroleum refinery.
Nefteper. i neftekhim. no.8:36-39 '64.   (MIRA 17:10)

1. Sibirskiy avtomobil'no-dorozhnyy institut.

ZAVADSKIY, V.Yu.

Wave motion in an elastic inhomogeneous layered medium with
a power law density variation and Lamé parameters. Akust.
zhur. 10 no.1:119-122 '64.   (MIRA 17:5)

1. Akusticheskiy institut AN SSSR, Moskva.

ZAVADSKIY, V.R.

Moscow circumferential highway. Gor. khoz. Mosk. 35 no.1:17-19
Ja '61.   (MIRA 14:2)

1. Glavnyy inzh.proyekta i stroitel'stva Moskovskoy kol'tsevoy
avtomobil'noy dorogi.
                        (Moscow--Roads)

ZAVADSKIY, V.B.

Moscow Ring Highway has been put into operation. Avt. dor. 26
no.1:8-13 Ja '63.
(MIRA 16:6)

1. Glavnyy inzhener stroitel'stva i avtor proyekta Moskovskoy
kol'tsevoy avtomobil'noy dorogi.
(Moscow—Roads)

ZAVADSKIY, V.B.

Moscow circumferential highway. Avt.dor. 19 no.11:7-9 N '56.

(MIRA 10:10)

(Moscow--Roads--Design)

ZAVADSKIY, V.B

ZAVADSKIY, V.B., inzhener.

New circular automobile highway. Gor.khoz.Mosk.30 no.12:21-27 D '56.
(Moscow—Road construction.)

ZAVADSKIY, V.B.

Moscow circumferential highway. Transp. stroi. 10 no.9:8-12 S '60.
(MIRA 13:9)

1. Glavnyy inzhener proyekta i stroitel'stva Moskovskoy kol'tsevoy
avtomobil'noy dorogi.
(Moscow—Roads)

ZAVADSKIY, V.B.; RITOV, M.N.

Practical plan for the organization of work. Avt.dor. 23 no.11:
18-20 N'60.   (MIRA 13:11)
            (Moscow region--Road construction)